

# Stanford

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## Suman Rimal

Postdoctoral Scholar, Pathology

### CONTACT INFORMATION

- **Alternate Contact**

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### Bio

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#### BIO

Research interests: Genetic mechanism underlying mitochondrial pathology, neurodegeneration, and muscle loss using *Drosophila* as a model organism.

#### HONORS AND AWARDS

- Young Investigator Award, Korean *Drosophila* Research Society (2019)
- Invited speaker at the 73rd annual conference, The Korean Association of Biological Sciences (2018)
- Global scholarship award for foreign graduate students, Kookmin University (2016)

#### PROFESSIONAL EDUCATION

- Bachelor of Science, Tribhuban University (2010)
- Doctor of Philosophy, Kookmin University (2019)
- Master of Science, Tribhuban University (2014)
- PhD, Kookmin University , Molecular Genetics (2019)
- MS, Tribhuban University , Medical Microbiology (2013)
- BS, Tribhuban University , Microbiology (2010)

#### STANFORD ADVISORS

- Bingwei Lu, Postdoctoral Faculty Sponsor

### Publications

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#### PUBLICATIONS

- **The p53 target DRAM1 modulates calcium homeostasis and ER stress by promoting contact between lysosomes and the ER through STIM1.** *Proceedings of the National Academy of Sciences of the United States of America*  
Wang, X., Geng, J., Rimal, S., Sui, Y., Pan, J., Qin, Z., Lu, B.  
2024; 121 (39): e2400531121

- **Translation stalling induced mitochondrial entrapment of ribosomal quality control related proteins offers cancer cell vulnerability.** *Research square*  
Ojha, R., Tantray, I., Banerjee, S., Rimal, S., Thirunavukkarasu, S., Srikrishna, S., Chiu, W., Mete, U., Sharma, A., Kakkar, N., Lu, B.  
2024
- **Ribosome stalling during c-myc translation presents actionable cancer cell vulnerability.** *PNAS nexus*  
Khaket, T. P., Rimal, S., Wang, X., Bhurtel, S., Wu, Y. C., Lu, B.  
2024; 3 (8): pgae321
- **Stalled translation by mitochondrial stress upregulates a CNOT4-ZNF598 ribosomal quality control pathway important for tissue homeostasis.** *Nature communications*  
Geng, J., Li, S., Li, Y., Wu, Z., Bhurtel, S., Rimal, S., Khan, D., Ohja, R., Brandman, O., Lu, B.  
2024; 15 (1): 1637
- **RACK1 and IRE1 participate in the translational quality control of amyloid precursor protein in Drosophila models of Alzheimer's disease.** *The Journal of biological chemistry*  
Li, Y., Liu, D., Zhang, X., Rimal, S., Lu, B., Li, S.  
2024: 105719
- **Reverse electron transfer is activated during aging and contributes to aging and age-related disease.** *EMBO reports*  
Rimal, S., Tantray, I., Li, Y., Pal Khaket, T., Li, Y., Bhurtel, S., Li, W., Zeng, C., Lu, B.  
2023: e55548
- **The mTORC2/AKT/VCP axis is associated with quality control of the stalled translation of poly(GR) dipeptide repeats in C9-ALS/FTD.** *The Journal of biological chemistry*  
Li, Y., Geng, J., Rimal, S., Wang, H., Liu, X., Lu, B., Li, S.  
2023: 102995
- **Prevention of ribosome collision-induced neuromuscular degeneration by SARS CoV-2-encoded Nsp1.** *Proceedings of the National Academy of Sciences of the United States of America*  
Wang, X., Rimal, S., Tantray, I., Geng, J., Bhurtel, S., Khaket, T. P., Li, W., Han, Z., Lu, B.  
2022; 119 (42): e2202322119
- **Regulation of reverse electron transfer at mitochondrial complex I by unconventional Notch action in cancer stem cells.** *Developmental cell*  
Ojha, R., Tantray, I., Rimal, S., Mitra, S., Cheshier, S., Lu, B.  
1800; 57 (2): 260
- **Inefficient quality control of ribosome stalling during APP synthesis generates CAT-tailed species that precipitate hallmarks of Alzheimer's disease.** *Acta neuropathologica communications*  
Rimal, S., Li, Y., Vartak, R., Geng, J., Tantray, I., Li, S., Huh, S., Vogel, H., Glabe, C., Grinberg, L. T., Spina, S., Seeley, W. W., Guo, et al  
2021; 9 (1): 169
- **Cucurbitacin B Activates Bitter-Sensing Gustatory Receptor Neurons via Gustatory Receptor 33a in Drosophila melanogaster.** *Molecules and cells*  
Rimal, S., Sang, J., Dhakal, S., Lee, Y.  
2020; 43 (6): 530-538
- **Molecular sensor of nicotine in taste of Drosophila melanogaster** *INSECT BIOCHEMISTRY AND MOLECULAR BIOLOGY*  
Rimal, S., Lee, Y.  
2019; 111: 103178
- **Mechanism of Acetic Acid Gustatory Repulsion in Drosophila** *CELL REPORTS*  
Rimal, S., Sang, J., Poudel, S., Thakur, D., Montell, C., Lee, Y.  
2019; 26 (6): 1432+
- **Gustatory receptor 28b is necessary for avoiding saponin in Drosophila melanogaster** *EMBO REPORTS*  
Sang, J., Rimal, S., Lee, Y.  
2019; 20 (2)
- **The multidimensional ionotropic receptors of Drosophila melanogaster** *INSECT MOLECULAR BIOLOGY*  
Rimal, S., Lee, Y.

